

# **F/A-18E/F FLUID MANIFOLD END GLAND**

## **COMPONENT PURPOSE/REQMTS:**

- This is part of the hydraulic subsystem that controls the rudder and aileron. The component is subjected to high mean stresses and alternating stresses at temperatures up to 100°C, and must also have good compatibility with hydraulic fluid and good wear resistance.

## **SELECTION CRITERIA:**

- high specific stiffness and strength
- good static and fatigue strength
- affordability

## **MATERIAL:**

- *Al 2009/SiC/15p* P/M material machined from extrusion
- previous material was aluminum bronze

## **BENEFITS:**

- lower weight and CTE and higher wear resistance than initial material
- 2X fatigue limit in hydraulic fluid relative to conventional Al alloys

